

**The Aroostook Medical Center
Aroostook County
Presque Isle, Maine
A-229-71-G-A**

**Departmental
Findings of Fact and Order
Air Emission License
Amendment #1**

After review of the air emissions license amendment application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

1. The Aroostook Medical Center (AMC) of Presque Isle, Maine was issued Air Emission License A-229-71-F-R on March 29, 2001, permitting the operation of emission sources associated with their healthcare facility.
2. AMC has requested an amendment to their license in order to replace the 300 kW emergency generator with a 800 kW emergency generator.

B. Emission Equipment

AMC is licensed to operate the following new equipment:

Electrical Generation Equipment

<u>Equipment</u>	<u>Power Output (kW)</u>	<u>Firing Rate (gal/hr)</u>	<u>Fuel Type, % sulfur</u>
Generator #2	800	57.8	diesel fuel, 0.05%

C. Application Classification

The modification of a minor source is considered a major modification based on whether or not expected emission increases exceed the "Significant Emission Levels" as given in Maine's Air Regulations. The emission increases are determined by subtracting the current licensed emissions preceding the modification from the maximum future licensed allowed emissions, as follows:

<u>Pollutant</u>	<u>Current License (TPY)</u>	<u>Future License (TPY)</u>	<u>Net Change (TPY)</u>	<u>Sig. Level</u>
PM	9.0	9.0	0.0	100
PM ₁₀	9.0	9.0	0.0	100
SO ₂	22.1	22.2	+0.1	100
NO _x	18.9	22.2	+3.3	100
CO	2.2	3.3	+1.1	100
VOC	0.3	0.3	0.0	50

This modification is determined to be a minor modification and has been processed as such.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Department regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in Chapter 100 of the Air Regulations. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. Generator #2

AMC currently operates a 300 kW back-up emergency generator and proposes replacing it with a new 800 kW unit.

“Emergency” is defined in Chapter 100 and throughout this document as: “... any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology based emission limitation under the license, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.”

A summary of the BACT analysis for Generator #2 (800 kW) is the following:

1. AMC shall fire only diesel fuel in Generator #2 with a maximum sulfur content not to exceed 0.05% by weight.
2. Generator #2 shall be limited to 500 hr/yr of operation based on a 12 month rolling total. Compliance shall be demonstrated by a written log of all generator operating hours.
3. Chapter 106 regulates fuel sulfur content, however in this case a BACT analysis for SO₂ determined a more stringent limit of 0.05% was appropriate and shall be used.
4. Chapter 103 regulates PM emission limits. The PM₁₀ limits are derived from the PM limits.
5. NO_x and CO emission limits are based upon AP-42 data dated 10/96.
6. VOC emission limits are based on data from the manufacturer.
7. Visible emissions from the generator shall not exceed 20% opacity on a 6-minute block average, except for no more than 2 six-minute block averages in a continuous 3-hour period.

C. Annual Emission Restrictions

AMC shall be restricted to the following annual emissions, based on a 12 month rolling total:

Total Allowable Annual Emission for the Facility
(used to calculate the annual license fee)

	PM	PM₁₀	SO₂	NO_x	CO	VOC
Boilers #1, 2, & 3	8.8	8.8	22.1	15.9	1.6	0.1
Generator #2	0.2	0.2	0.1	6.3	1.7	0.2
Total TPY	9.0	9.0	22.2	22.2	3.3	0.3

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-229-71-G-A subject to the conditions found in Air Emission License A-229-71-F-R, and in the following conditions:

The following shall replace Condition (17) of Air Emission License A-229-71-F-R once the 300 kW emergency generator has been removed:

(17) **Generator #2**

- A. AMC shall limit Generator #2 to 500 hr/yr of operation (based on a 12 month rolling total). An hour meter shall be maintained and operated on Generator #2.
- B. A log documenting the dates, times, and reason of operation for Generator #2 shall be kept.
- C. Generator #2 shall fire diesel fuel with a sulfur limit not to exceed 0.05% by weight. Compliance shall be based on fuel receipts from the supplier showing the quantity of fuel delivered and the percent sulfur of the fuel.
- D. Emissions shall not exceed the following:

Equipment		PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Generator #2	lb/MMBtu	0.12	-	-	-	-	-
	lb/hr	0.95	0.95	0.41	25.34	6.73	0.87

- E. Visible emissions from Generator #2 shall not exceed 20% opacity on a 6-minute block average, except for no more than 2 six-minute block averages in a continuous 3-hour period.

The following are new Conditions:

- (19) AMC shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (Title 38 MRSA §605-C).

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- (20) AMC shall pay the annual air emission license fee within 30 days of April 30th of each year. Pursuant to 38 M.R.S.A. Section 353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under 38 M.R.S.A. Section 341-D, Subsection 3.
- (21) This amendment shall expire concurrently with Air Emission License A-229-71-F-R.

DONE AND DATED IN AUGUSTA, MAINE THIS _____ DAY OF _____ 2003.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAWN R. GALLAGHER, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 6/3/03

Date of application acceptance: 6/3/03

Date filed with the Board of Environmental Protection: _____

This Order prepared by Lynn Ross, Bureau of Air Quality.